

4D17a/
G6
No. 116

University of California
College of Agriculture
Agricultural Experiment Station
Berkeley, California

California Asparagus: Marketing Channels and
Farm-to-Retail Margins, 1949

by

Jerry Foytik

Results of a Study Conducted by the
California Agricultural Experiment Station
in Cooperation with the
United States Department of Agriculture,
Bureau of Agricultural Economics, and the
California Farm Bureau Federation

June 1951

Contribution from the
Giannini Foundation of Agricultural Economics
Mimeographed Report No. 116

UNIVERSITY OF CALIFORNIA
LIBRARY
COLLEGE OF AGRICULTURE
DAVIS



Table of Contents

	<u>Page</u>
Introduction	1
Channels of Distribution	3
Dealer Types	3
Geographic Movement	6
Farm-to-Retail Margins	10
Main Cost Components	10
Retail Margins	13
Preretail Margins	15
Acknowledgments	17
Appendix A. Procedures Used	18
The Store Sample	18
Data Collection	20
Weighting System	20
Distribution Channels	21
Marketing Costs	23
Appendix B. Definition of Terms	27
Geographic Areas	27
Dealer Types	28
Store Types	29

Table of Contents

Page

1	Introduction
2	Statement of Objectives
3	Scope of the Study
4	Methodology
5	Results and Discussion
6	Conclusions
7	References
8	Appendix A
9	Appendix B
10	Appendix C
11	Appendix D
12	Appendix E
13	Appendix F
14	Appendix G
15	Appendix H
16	Appendix I
17	Appendix J
18	Appendix K
19	Appendix L
20	Appendix M
21	Appendix N
22	Appendix O
23	Appendix P
24	Appendix Q
25	Appendix R
26	Appendix S
27	Appendix T

California Asparagus: Marketing Channels and Farm-to-Retail Margins, 1949

by

Jerry Foytik^{1/}

Introduction

This report describes the distribution channels utilized and the marketing margins incurred in moving fresh asparagus from producing areas to the housewife. It relates to one phase of a larger study undertaken in 1948 jointly by the California Farm Bureau Federation, the United States Department of Agriculture, Bureau of Agricultural Economics, and the California Agricultural Experiment Station. The over-all investigation was made in an endeavor to provide a basis for suggesting possible improvements in the marketing of fresh fruits and vegetables produced and consumed within California.

Processing is the major outlet for California asparagus--canning takes about 60 per cent of the harvested production and freezing, 15 per cent. Yet, substantial quantities (25 per cent of the crop) go into fresh market channels. The amount so used constitutes an important portion of the total supply of California-grown fresh fruits and vegetables sold locally. As in the case of the other fresh fruits and vegetables, a variety of marketing methods are employed in moving asparagus from the producer to the ultimate consumer.

The information presented is based upon material collected on visits to selected retail stores made during the period, March-June 1949. Visitations were confined to independent and local chain stores located within the portion of California west of the Sierra Nevada Mountains. Thus, retail stores located in Alpine, Mono, and Inyo counties and restaurants, farmers' roadside stands, and national chain stores were excluded from the study.

A sample of 66 stores in the more densely populated and accessible areas of the state were visited eight times--once each half month in March, April, May, and June. During early April and early June, visits were also made to 117 stores located in the relatively remote regions. In about 80 per cent of the visits asparagus was sold and satisfactory data could be obtained. Thus, a total of 603 usable field interview schedules was secured--417 for northern California and 186 for southern California--representing a volume of 7,000 crates.

The basic procedure for establishing the facts regarding the movement of supplies and distribution costs consisted of following each lot of asparagus from the retail store back to the original producer. At each point in the distributive system, prices and sources of supplies were noted. In addition, the retail proprietor or store manager was asked: "How many pounds were thrown away last week due to waste and spoilage?" and "What amount was sold last week?" The answers to these questions supplied information on spoilage loss and the weight to be attached to each store in the computation of certain weighted averages.

^{1/} Assistant Professor of Agricultural Economics and Assistant Agricultural Economist in the Agricultural Experiment Station and on the Giannini Foundation, Davis, California.

4

Geographic location, city size, store size, and store type formed the basis for classifying the original schedules into various subgroups for which the data were summarized.^{1/}

Among the significant findings to be discussed are:

1. California asparagus sold fresh in local retail stores comes chiefly from the San Joaquin Valley, although a large part of the sales made in southern California is secured from near-by producing areas.
2. Asparagus marketed fresh moves from producers to wholesalers to retailers. During the latter part of this distributive channel, an appreciable portion of the total volume is handled by truck-jobbers, especially in the Sacramento and San Joaquin valleys. Very little is sold by producers directly to retailers or is handled by packers or truckers.
3. Striking variations in the sources of retailers' asparagus supplies exist due to the geographic location of stores. Retailers in large cities secure almost their entire supply from near-by wholesalers. Small city retailers obtain 30 per cent of the asparagus they sell from producers, packers, truckers, and truck-jobbers, 13 per cent from small city wholesalers and 57 per cent from wholesalers in neighboring large cities.
4. Southern California retailers obtain almost half of their asparagus from producers in southern California and 35 per cent from south San Joaquin Valley. Retailers in northern California are supplied primarily from producing areas in north San Joaquin Valley.
5. Losses due to physical waste and spoilage are negligible, averaging less than half a pound from each 32-pound crate--for example, about 1.4 per cent of the supplies shipped to retailers.
6. The cost of retailing is an important element in the total cost of moving asparagus to the consumer. About 27 cents of the retail dollar go to cover the retailers' margin.
7. The preretail margin is almost 27 per cent of the retail price. Packaging, transportation and wholesaling accounted for 15, 3, and 9 cents, respectively, of the retail dollar.
8. Thus, about 46 cents of the consumer's dollar remained for growers to cover costs of production, harvest and field packing.

^{1/} A more detailed description of the procedure used is given in Appendix A. Here, also, are given certain data from which the summaries appearing in the text tables were prepared. The precise meanings to be attached to the various terms used throughout the report appear in Appendix B. In some cases these are somewhat at variance with prevailing usage. For example, some dealers often called "jobbers" are, for convenience of this study, classified as "wholesalers."

9. There are significant differences among stores with respect to their spoilage loss, retail margin, and consumer price. These variations can be partly explained by difference in the location size, and type of stores considered. Generally, retail prices and retail margins were lower and spoilage was higher at cash-carry stores and in northern California. In the large cities of the Central Valley, retail prices and spoilage losses were much higher for large fruit and vegetable stores than for large grocery and small stores.

Channels of Distribution

A description of the channels through which fresh asparagus, as well as other commodities, flow from producers to consumers includes two separate aspects. Various dealers bring together supplies from many producers and then disperse them among numerous retail outlets at which housewives make their purchases. These supplies move from producing areas to consuming markets along a variety of geographic paths.

Dealer Types.--The relative importance of the different dealer types handling California-produced fresh asparagus sold through retail stores (exclusive of national chains) within the state is shown in figure 1. Material is shown separately for the northern and southern parts of the state--as divided by the Tehachapi Mountains. Grower-shippers (producers who operate permanent packing sheds and grow at least half of the produce packed in these sheds) handle about two-thirds of the asparagus sold at retail in California.

It will be noted that the principal channel for marketing fresh asparagus is from the producer through the wholesaler to the retailer. Only a small portion of this quantity in northern California and none in southern California passes through packers or truckers on its way to the wholesaler. Direct marketing, from producer to retailer, was negligible in northern California (3 per cent of the total retail volume) and did not occur in the sample stores representing the southern portion of the state.

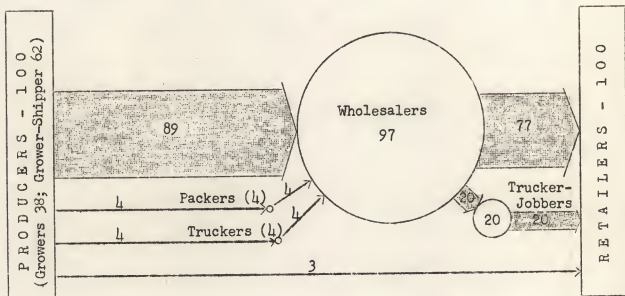
Truck-jobbers handle a substantial quantity of the asparagus sold at retail, especially north of the Tehachapi Mountains. About 20 and 12 per cent of retail sales in the northern and southern portions of the state, respectively, are moved through truck-jobbers, who generally buy a wide variety of items from wholesalers and resell to retailers along a regular truck route.

Table 1 indicates several striking differences in the retailers' source of asparagus by dealer types. Producers and packers are not an important source of supplies for retailers. They furnish about 5 per cent of the asparagus sold by retailers located in the Sacramento and San Joaquin valleys and only negligible quantities handled by retail stores in the remainder of the state. Retailers in small cities of all parts of the state obtain a considerably larger portion of their supplies from truckers and truck-jobbers than do large city retailers--29 compared to 2 per cent, respectively. In summary, about 30 per cent of the asparagus sold by small city retailers and 15 per cent of the volume handled by retailers in large cities comes from producers, packers, truckers, and truck jobbers.

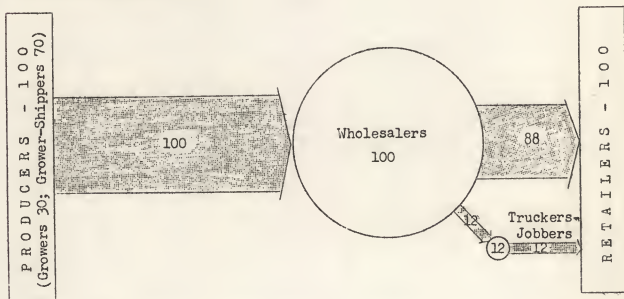
FIGURE 1

Marketing Channels for Fresh Asparagus
Northern California and Southern California, 1949

Northern California



Southern California



(Note: All numbers expressed as percent of total volume sold at retail)

THE UNIVERSITY OF CHICAGO

CHICAGO, ILL.



CHICAGO, ILL.



TABLE 1

Retailers Source of Fresh Asparagus, by Dealer Types,^{a/}
California, March-June 1949

Retail store location ^{b/}	Producers and packers	Truckers and truck-jobbers	Wholesalers in	
			Large cities	Small cities
	1	2	3	4
	per cent of all dealer types			
<u>Southern California</u>				
Large cities	0	3.1	96.9	0
Small cities	0.4	20.1	75.8	3.7
All cities	0.1	9.0	89.6	1.3
<u>Central Valley</u>				
Large cities	4.5	1.9	93.6	0
Small cities	5.0	34.8	45.7	14.5
All cities	4.9	28.9	54.3	11.9
<u>Coastal northern California</u>				
Large cities	0	0.5	99.5	0
Small cities	1.6	34.5	40.8	23.1
All cities	0.6	13.5	77.0	8.9
<u>California</u>				
Large cities	0.3	2.1	97.6	0
Small cities	2.2	28.8	56.5	12.5
All cities	1.1	13.9	79.5	5.5

^{a/} Classification of persons from whom retailers purchased their supplies.

^{b/} See figure 2 for geographic distribution of survey cities and Appendix B for definition of city size.

2. 1940-1941
 3. 1941-1942
 4. 1942-1943
 5. 1943-1944
 6. 1944-1945
 7. 1945-1946
 8. 1946-1947
 9. 1947-1948
 10. 1948-1949
 11. 1949-1950
 12. 1950-1951
 13. 1951-1952
 14. 1952-1953
 15. 1953-1954
 16. 1954-1955
 17. 1955-1956
 18. 1956-1957
 19. 1957-1958
 20. 1958-1959
 21. 1959-1960
 22. 1960-1961
 23. 1961-1962
 24. 1962-1963
 25. 1963-1964
 26. 1964-1965
 27. 1965-1966
 28. 1966-1967
 29. 1967-1968
 30. 1968-1969
 31. 1969-1970
 32. 1970-1971
 33. 1971-1972
 34. 1972-1973
 35. 1973-1974
 36. 1974-1975
 37. 1975-1976
 38. 1976-1977
 39. 1977-1978
 40. 1978-1979
 41. 1979-1980
 42. 1980-1981
 43. 1981-1982
 44. 1982-1983
 45. 1983-1984
 46. 1984-1985
 47. 1985-1986
 48. 1986-1987
 49. 1987-1988
 50. 1988-1989
 51. 1989-1990
 52. 1990-1991
 53. 1991-1992
 54. 1992-1993
 55. 1993-1994
 56. 1994-1995
 57. 1995-1996
 58. 1996-1997
 59. 1997-1998
 60. 1998-1999
 61. 1999-2000
 62. 2000-2001
 63. 2001-2002
 64. 2002-2003
 65. 2003-2004
 66. 2004-2005
 67. 2005-2006
 68. 2006-2007
 69. 2007-2008
 70. 2008-2009
 71. 2009-2010
 72. 2010-2011
 73. 2011-2012
 74. 2012-2013
 75. 2013-2014
 76. 2014-2015
 77. 2015-2016
 78. 2016-2017
 79. 2017-2018
 80. 2018-2019
 81. 2019-2020
 82. 2020-2021
 83. 2021-2022
 84. 2022-2023
 85. 2023-2024
 86. 2024-2025
 87. 2025-2026
 88. 2026-2027
 89. 2027-2028
 90. 2028-2029
 91. 2029-2030
 92. 2030-2031
 93. 2031-2032
 94. 2032-2033
 95. 2033-2034
 96. 2034-2035
 97. 2035-2036
 98. 2036-2037
 99. 2037-2038
 100. 2038-2039
 101. 2039-2040
 102. 2040-2041
 103. 2041-2042
 104. 2042-2043
 105. 2043-2044
 106. 2044-2045
 107. 2045-2046
 108. 2046-2047
 109. 2047-2048
 110. 2048-2049
 111. 2049-2050
 112. 2050-2051
 113. 2051-2052
 114. 2052-2053
 115. 2053-2054
 116. 2054-2055
 117. 2055-2056
 118. 2056-2057
 119. 2057-2058
 120. 2058-2059
 121. 2059-2060
 122. 2060-2061
 123. 2061-2062
 124. 2062-2063
 125. 2063-2064
 126. 2064-2065
 127. 2065-2066
 128. 2066-2067
 129. 2067-2068
 130. 2068-2069
 131. 2069-2070
 132. 2070-2071
 133. 2071-2072
 134. 2072-2073
 135. 2073-2074
 136. 2074-2075
 137. 2075-2076
 138. 2076-2077
 139. 2077-2078
 140. 2078-2079
 141. 2079-2080
 142. 2080-2081
 143. 2081-2082
 144. 2082-2083
 145. 2083-2084
 146. 2084-2085
 147. 2085-2086
 148. 2086-2087
 149. 2087-2088
 150. 2088-2089
 151. 2089-2090
 152. 2090-2091
 153. 2091-2092
 154. 2092-2093
 155. 2093-2094
 156. 2094-2095
 157. 2095-2096
 158. 2096-2097
 159. 2097-2098
 160. 2098-2099
 161. 2099-2100
 162. 2100-2101
 163. 2101-2102
 164. 2102-2103
 165. 2103-2104
 166. 2104-2105
 167. 2105-2106
 168. 2106-2107
 169. 2107-2108
 170. 2108-2109
 171. 2109-2110
 172. 2110-2111
 173. 2111-2112
 174. 2112-2113
 175. 2113-2114
 176. 2114-2115
 177. 2115-2116
 178. 2116-2117
 179. 2117-2118
 180. 2118-2119
 181. 2119-2120
 182. 2120-2121
 183. 2121-2122
 184. 2122-2123
 185. 2123-2124
 186. 2124-2125
 187. 2125-2126
 188. 2126-2127
 189. 2127-2128
 190. 2128-2129
 191. 2129-2130
 192. 2130-2131
 193. 2131-2132
 194. 2132-2133
 195. 2133-2134
 196. 2134-2135
 197. 2135-2136
 198. 2136-2137
 199. 2137-2138
 200. 2138-2139
 201. 2139-2140
 202. 2140-2141
 203. 2141-2142
 204. 2142-2143
 205. 2143-2144
 206. 2144-2145
 207. 2145-2146
 208. 2146-2147
 209. 2147-2148
 210. 2148-2149
 211. 2149-2150
 212. 2150-2151
 213. 2151-2152
 214. 2152-2153
 215. 2153-2154
 216. 2154-2155
 217. 2155-2156
 218. 2156-2157
 219. 2157-2158
 220. 2158-2159
 221. 2159-2160
 222. 2160-2161
 223. 2161-2162
 224. 2162-2163
 225. 2163-2164
 226. 2164-2165
 227. 2165-2166
 228. 2166-2167
 229. 2167-2168
 230. 2168-2169
 231. 2169-2170
 232. 2170-2171
 233. 2171-2172
 234. 2172-2173
 235. 2173-2174
 236. 2174-2175
 237. 2175-2176
 238. 2176-2177
 239. 2177-2178
 240. 2178-2179
 241. 2179-2180
 242. 2180-2181
 243. 2181-2182
 244. 2182-2183
 245. 2183-2184
 246. 2184-2185
 247. 2185-2186
 248. 2186-2187
 249. 2187-2188
 250. 2188-2189
 251. 2189-2190
 252. 2190-2191
 253. 2191-2192
 254. 2192-2193
 255. 2193-2194
 256. 2194-2195
 257. 2195-2196
 258. 2196-2197
 259. 2197-2198
 260. 2198-2199
 261. 2199-2200
 262. 2200-2201
 263. 2201-2202
 264. 2202-2203
 265. 2203-2204
 266. 2204-2205
 267. 2205-2206
 268. 2206-2207
 269. 2207-2208
 270. 2208-2209
 271. 2209-2210
 272. 2210-2211
 273. 2211-2212
 274. 2212-2213
 275. 2213-2214
 276. 2214-2215
 277. 2215-2216
 278. 2216-2217
 279. 2217-2218
 280. 2218-2219
 281. 2219-2220
 282. 2220-2221
 283. 2221-2222
 284. 2222-2223
 285. 2223-2224
 286. 2224-2225
 287. 2225-2226
 288. 2226-2227
 289. 2227-2228
 290. 2228-2229
 291. 2229-2230
 292. 2230-2231
 293. 2231-2232
 294. 2232-2233
 295. 2233-2234
 296. 2234-2235
 297. 2235-2236
 298. 2236-2237
 299. 2237-2238
 300. 2238-2239
 301. 2239-2240
 302. 2240-2241
 303. 2241-2242
 304. 2242-2243
 305. 2243-2244
 306. 2244-2245
 307. 2245-2246
 308. 2246-2247
 309. 2247-2248
 310. 2248-2249
 311. 2249-2250
 312. 2250-2251
 313. 2251-2252
 314. 2252-2253
 315. 2253-2254
 316. 2254-2255
 317. 2255-2256
 318. 2256-2257
 319. 2257-2258
 320. 2258-2259
 321. 2259-2260
 322. 2260-2261
 323. 2261-2262
 324. 2262-2263
 325. 2263-2264
 326. 2264-2265
 327. 2265-2266
 328. 2266-2267
 329. 2267-2268
 330. 2268-2269
 331. 2269-2270
 332. 2270-2271
 333. 2271-2272
 334. 2272-2273
 335. 2273-2274
 336. 2274-2275
 337. 2275-2276
 338. 2276-2277
 339. 2277-2278
 340. 2278-2279
 341. 2279-2280
 342. 2280-2281
 343. 2281-2282
 344. 2282-2283
 345. 2283-2284
 346. 2284-2285
 347. 2285-2286
 348. 2286-2287
 349. 2287-2288
 350. 2288-2289
 351. 2289-2290
 352. 2290-2291
 353. 2291-2292
 354. 2292-2293
 355. 2293-2294
 356. 2294-2295
 357. 2295-2296
 358. 2296-2297
 359. 2297-2298
 360. 2298-2299
 361. 2299-2300
 362. 2300-2301
 363. 2301-2302
 364. 2302-2303
 365. 2303-2304
 366. 2304-2305
 367. 2305-2306
 368. 2306-2307
 369. 2307-2308
 370. 2308-2309
 371. 2309-2310
 372. 2310-2311
 373. 2311-2312
 374. 2312-2313
 375. 2313-2314
 376. 2314-2315
 377. 2315-2316
 378. 2316-2317
 379. 2317-2318
 380. 2318-2319
 381. 2319-2320
 382. 2320-2321
 383. 2321-2322
 384. 2322-2323
 385. 2323-2324
 386. 2324-2325
 387. 2325-2326
 388. 2326-2327
 389. 2327-2328
 390. 2328-2329
 391. 2329-2330
 392. 2330-2331
 393. 2331-2332
 394. 2332-2333
 395. 2333-2334
 396. 2334-2335
 397. 2335-2336
 398. 2336-2337
 399. 2337-2338
 400. 2338-2339
 401. 2339-2340
 402. 2340-2341
 403. 2341-2342
 404. 2342-2343
 405. 2343-2344
 406. 2344-2345
 407. 2345-2346
 408. 2346-2347
 409. 2347-2348
 410. 2348-2349
 411. 2349-2350
 412. 2350-2351
 413. 2351-2352
 414. 2352-2353
 415. 2353-2354
 416. 2354-2355
 417. 2355-2356
 418. 2356-2357
 419. 2357-2358
 420. 2358-2359
 421. 2359-2360
 422. 2360-2361
 423. 2361-2362
 424. 2362-2363
 425. 2363-2364
 426. 2364-2365
 427. 2365-2366
 428. 2366-2367
 429. 2367-2368
 430. 2368-2369
 431. 2369-2370
 432. 2370-2371
 433. 2371-2372
 434. 2372-2373
 435. 2373-2374
 436. 2374-2375
 437. 2375-2376
 438. 2376-2377
 439. 2377-2378
 440. 2378-2379
 441. 2379-2380
 442. 2380-2381
 443. 2381-2382
 444. 2382-2383
 445. 2383-2384
 446. 2384-2385
 447. 2385-2386
 448. 2386-2387
 449. 2387-2388
 450. 2388-2389
 451. 2389-2390
 452. 2390-2391
 453. 2391-2392
 454. 2392-2393
 455. 2393-2394
 456. 2394-2395
 457. 2395-2396
 458. 2396-2397
 459. 2397-2398
 460. 2398-2399
 461. 2399-2400
 462. 2400-2401
 463. 2401-2402
 464. 2402-2403
 465. 2403-2404
 466. 2404-2405
 467. 2405-2406
 468. 2406-2407
 469. 2407-2408
 470. 2408-2409
 471. 2409-2410
 472. 2410-2411
 473. 2411-2412
 474. 2412-2413
 475. 2413-2414
 476. 2414-2415
 477. 2415-2416
 478. 2416-2417
 479. 2417-2418
 480. 2418-2419
 481. 2419-2420
 482. 2420-2421
 483. 2421-2422
 484. 2422-2423
 485. 2423-2424
 486. 2424-2425
 487. 2425-2426
 488. 2426-2427
 489. 2427-2428
 490. 2428-2429
 491. 2429-2430
 492. 2430-2431
 493. 2431-2432
 494. 2432-2433
 495. 2433-2434
 496. 2434-2435
 497. 2435-2436
 498. 2436-2437
 499. 2437-2438
 500. 2438-2439
 501. 2439-2440
 502. 2440-2441
 503. 2441-2442
 504. 2442-2443
 505. 2443-2444
 506. 2444-2445
 507. 2445-2446
 508. 2446-2447
 509. 2447-2448
 510. 2448-2449
 511. 2449-2450
 512. 2450-2451
 513. 2451-2452
 514. 2452-2453
 515. 2453-2454
 516. 2454-2455
 517. 2455-2456
 518. 2456-2457
 519. 2457-2458
 520. 2458-2459
 521

Thus, about 85 and 70 per cent of the asparagus sold in large cities and small cities, respectively, move from wholesale markets to retail stores. The bulk of the asparagus sold in small cities--especially in southern California--coming from wholesale markets is obtained from large city wholesalers. That is, there is a definite tendency for retailers in small cities to supplement asparagus obtained directly from producing areas by supplies from wholesalers located in the larger cities. Small city wholesalers account for 4, 15, and 23 per cent, respectively, of retail sales in the small cities of southern California, Central Valley, and coastal northern California.

Geographic Movement.--The production of asparagus, destined for fresh use by California consumers, is confined principally to the counties of north San Joaquin Valley and the adjoining Sacramento Delta area. As a consequence, the general geographic movement of supplies sold at retail within the state is from this region to the metropolitan areas of Los Angeles and San Francisco. Actually, an important question requiring elaboration is: "How do supplies reach retailers?" That is, there needs to be some indication as to the relative importance of the various producing areas from which asparagus is secured.

In California the production of asparagus is localized in three distinct areas. The most important of these includes the Sacramento Delta area and adjoining regions. The 1948 crop of 68,000 tons (4.2 million crates) was produced on 64,500 bearing acres. Almost three-quarters of the bearing acreage of California asparagus was in San Joaquin County. Another 20 per cent was located in the four counties north and west of San Joaquin. About two-thirds of the remaining 7 per cent was in the lower San Joaquin Valley and one-third in southern California, centered around Los Angeles and Orange counties. These bearing acreage data for 1948 are summarized, on a county basis, in table 2.

Figure 2 shows the geographic distribution of survey cities and producing areas. This information is relevant to our discussion of the geographic movement of supplies for fresh sales to each of the three major subdivisions of the state. Since, however, some 75 per cent of the California asparagus crop is processed, the actual geographic movement of supplies for fresh sales within the state may be somewhat different from the pattern suggested by the data of table 2.

Since variations in retailers' sources arise from differences in the geographic location of stores, the summary presented in table 3 shows the grower sources for various retail store locations. These data reveal a definite tendency for asparagus from the southern portion of the state to move to retailers in southern California and for supplies produced some 300 miles further north to be sold in retail stores of northern California.

Asparagus grown south of the Tehachapi Mountains flows to retail stores in southern California. About 37 and 61 per cent of retail sales in large cities and small cities (of the southern portion of the state) come from near-by producing areas. The remaining supplies are drawn from the San Joaquin Valley--particularly, the southern five counties of this valley (Kern, Kings, Tulare, Fresno, and Madera), especially in the case of asparagus sold in the large cities.

Almost the entire quantity of asparagus sold at retail in the remainder of the state comes from the region included in north San Joaquin Valley and the

The first part of the document is a letter to the President of the United States, dated January 1, 1941, from the Secretary of the American Association of University Professors. The letter discusses the situation of university professors in the United States and abroad, and the need for a statement of principles regarding academic freedom and the rights of university professors. The letter is signed by the Secretary, and is addressed to the President.

The second part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

The third part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

The fourth part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

The fifth part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

The sixth part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

The seventh part of the document is a statement of principles regarding academic freedom and the rights of university professors. It is a statement of the American Association of University Professors, and is dated January 1, 1941. The statement discusses the importance of academic freedom and the rights of university professors, and the need for a statement of principles regarding these issues. The statement is signed by the American Association of University Professors, and is addressed to the President of the United States.

TABLE 2

Bearing Acreage of Asparagus by Counties,
California, 1948

County	Acres
San Joaquin	47,550
Contra Costa	6,130
Yolo	2,950
Sacramento	2,310
Solano	1,030
Fresno	1,040
Tulare	810
Madera	760
Kern	300
Other northern California	90
Los Angeles	1,200
Orange	260
Other southern California	100
California	64,530

Source: California Crop and Livestock Reporting Service,
"Vegetable Crops in California," May 1950.

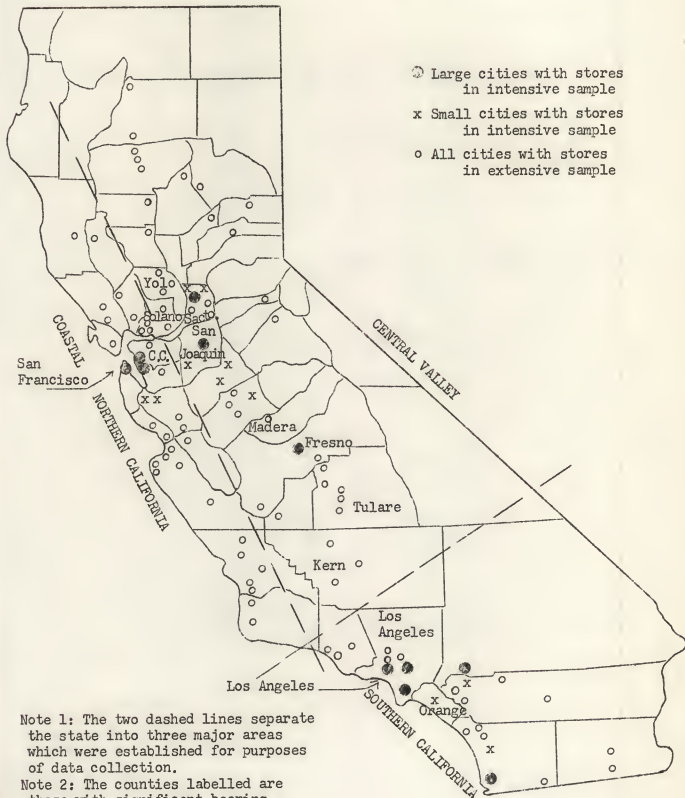
THE UNIVERSITY OF CHICAGO

NAME	ADDRESS	CITY
J. Edgar Hoover	Washington, D. C.	Washington, D. C.
W. A. Rorer	Washington, D. C.	Washington, D. C.
C. Vann Woodward	Washington, D. C.	Washington, D. C.
L. B. Nichols	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.
J. Lee Rankin	Washington, D. C.	Washington, D. C.

THE UNIVERSITY OF CHICAGO
 5500 S. UNIVERSITY AVE.
 CHICAGO, ILL. 60637

FIGURE 2

Geographic Distribution of Survey Cities and Producing Areas



Note 1: The two dashed lines separate the state into three major areas which were established for purposes of data collection.

Note 2: The counties labelled are those with significant bearing acreage in 1948 (see table 2).

TABLE 3

Retailers' Source of Fresh Asparagus, by Producing Areas^{a/},
California, March-June 1949

Retail store location ^{b/}	Southern California	South San Joaquin Valley ^{c/}	North San Joaquin Valley ^{d/}	Other northern California
	1	2	3	4
	per cent of all producing areas			
<u>Southern California</u>				
Large cities	36.6	47.9	15.5	0
Small cities	61.2	10.2	25.8	2.8
All cities	45.1	34.8	19.1	1.0
<u>Central Valley</u>				
Large cities	0	38.4	47.6	14.0
Small cities	1.0	5.4	74.4	19.2
All cities	0.8	11.4	69.5	18.3
<u>Coastal Northern California</u>				
Large cities	0	0	100.0	0
Small cities	0	0	98.0	2.0
All cities	0	0	99.2	0.8
<u>California</u>				
Large cities	22.0	30.9	46.3	0.8
Small cities	25.0	5.9	61.2	7.9
All cities	23.3	19.9	52.8	4.0

^{a/} Classification of areas purchasing the asparagus ultimately sold at retail.

^{b/} See figure 2 for geographic distribution of survey cities and Appendix B for definition of city size.

^{c/} Includes Kern, Kings, Tulare, Fresno, and Madera counties.

^{d/} Includes San Joaquin, Stanislaus, Merced, Mariposa, Tuolumne, Calaveras, and Amador counties and the "Delta area" of Solano, Yolo, and Sacramento counties.

Sacramento Delta area. The important exception being the large cities of the Central Valley (Sacramento, Stockton, and Fresno). They obtain almost as much asparagus from the southern portion of the San Joaquin Valley as from the northern part. Retailers in both large and small cities of the Central Valley receive a substantial volume of asparagus grown in "Other northern California"--primarily south Sacramento Valley, just north of the Delta area.

Farm-to-Retail Margins

The producer, the retailer, and each intervening dealer handling asparagus receives a portion of the final price paid by the housewife. Certain physical losses due to waste and spoilage are incurred during the process of moving supplies from producing areas to consuming markets. Both of these aspects of the distributive problem are to be considered briefly here.

In this description the term "margin" refers to the difference between the price paid by a handler (delivered to his premises) and the price received by the same handler (f.o.b. his premises). If the handler performs the transportation function, an estimate for the cost is deducted. Thus, "margin" refers to the charges made rather than the sum of expenses incurred for labor, rent, depreciation, etc.

Main Cost Components.--California consumers paid an average price of 19.5 cents per pound for asparagus purchased at retail during the survey period. Approximately one-quarter of the consumer's dollar was accounted for by the retailer's margin--to reimburse the retailer's expenses and to compensate for spoilage occurring within the distributive channel. Another quarter covered all other distributive charges incurred in packing, transporting, and wholesaling. Almost half of the retail price was returned to growers to cover their production and harvesting costs.

The average crate leaving the farm contained 32.3 pounds of asparagus, including 31.9 pounds sold to consumers and 0.4 pounds unmerchantable at retail because of spoilage loss. The quantity not sold due to waste and spoilage includes both the amount thrown away while unpacking and additional asparagus subsequently spoiled or damaged in the store. In other words, from a crate bought by the average retailer almost 32 pounds were sold to consumers for \$6.21, that is, at approximately 19.5 cents per pound. The spoilage loss is shown as a part of the retailer's margin.

Over half of the preretail distribution margin consists of charges for "packing and container." This item includes the cost of the container, hauling to the packing shed, cost of packing--whether performed by packers or by growers--and net profits for packers. About one-third was accounted for by the "wholesaling margin," which includes all charges, fees, commissions, and net profits by dealers between packers and retailer. "Transportation"--approximately 10 per cent of the preretail marketing charges--is considered as a separate item regardless of who performed the function.

"Farm price" is the residual obtained by subtracting the retail and preretail margins from the price charged consumers. It is specified at the farm gate in order to include the amount received by growers for harvested but unpacked asparagus. When field packing was performed, however, the packing costs were included within the farm price.

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

Section 10

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

TABLE 4

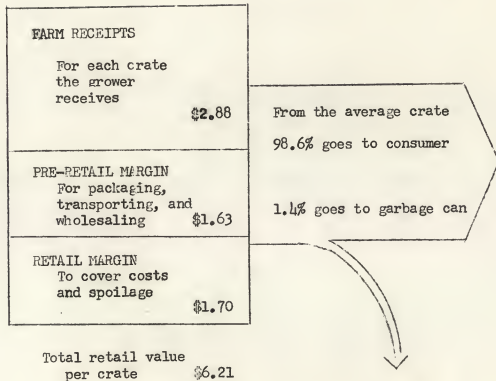
Main Cost Components for Fresh Asparagus
California, March-June 1949

Item	Costs for 31.9 pounds sold at retail (98.6 per cent of the original crate)	Costs for 0.4 pounds not sold due to spoilage ^{a/} (1.4 per cent of crate)	Total costs (32.3 pounds leaving the farm and 31.9 pounds sold at retail)	Percentage distribution of costs for 32.3 pounds leaving the farm
	1	2	3	4
	dollars per crate (of 32.3 pounds) leaving the farm			per cent
Farm price (at farm gate) ^{b/}	2.840	.040	2.88	46.4
Packing and container	.897	.013	.91	14.7
Transportation	.168	.002	.17	2.7
Wholesaling margin	<u>.542</u>	<u>.008</u>	<u>.55</u>	<u>8.8</u>
Preretail margin	1.607	.023	1.63	26.2
Retail margin	<u>1.676</u>	<u>.024</u>	<u>1.70</u>	<u>27.4</u>
Total	6.123	.087	6.21	100.0
Retail price (cents per pound) ^{c/}			19.5	

^{a/} Physical losses through waste and spoilage.^{b/} Includes harvesting costs but excludes packing cost unless performed in the field.^{c/} Retail price to the consumer: Total cost (\$6.21) divided by volume of sales (31.9 pounds).

FIGURE 3

Distribution of Total Retail Value of Fresh Asparagus
California, 1949



0.4 lbs. entering
the retail store are,
or become unusable
due to spoilage



31.9 lbs. entering the
retail store are sold at
19.5 cents per lb. (for
a retail value of \$6.21).

1. The first part of the paper
 is devoted to a general
 survey of the subject.

The second part of the paper
 is devoted to a detailed
 study of the subject.

The third part of the paper
 is devoted to a detailed
 study of the subject.

1. The first part of the paper	10%
2. The second part of the paper	20%
3. The third part of the paper	30%
4. The fourth part of the paper	40%
5. The fifth part of the paper	50%
6. The sixth part of the paper	60%
7. The seventh part of the paper	70%
8. The eighth part of the paper	80%
9. The ninth part of the paper	90%
10. The tenth part of the paper	100%

The first part of the paper
 is devoted to a general
 survey of the subject.



The second part of the paper
 is devoted to a detailed
 study of the subject.

The distribution of consumers' expenditures among these cost categories is shown in table 4. Total costs incurred in moving one crate of asparagus through the entire distributive channel from the producer to the housewife are prorated between actual sales (98.6 per cent of the original crate) and the quantities not sold due to spoilage. In the last column appears the percentage distribution of costs. These figures correspond to the "per cent of the consumer's dollar" as this term is used by the U.S. Bureau of Agricultural Economics.

This information is portrayed in a somewhat different way by figure 3. Three blocks (proportional to the percentage distribution of the retail price) on the left indicate the major recipients of the consumer's expenditure (\$6.21) for a crate of asparagus leaving the farm. The physical division of these 32.3 pounds of produce between the housewife and the garbage can is shown on the right. One stalk of asparagus must be discarded by the retailer for every seven he sells to his customers.

Retail Margins.--As might be expected, there is considerable variation among stores with respect to their spoilage, retail margin, and consumer price. Appendix table A-3 presents these data for the survey stores classified according to geographic location, store size, and store type. Comparable data for selected larger store groupings are summarized in table 5. Variations in these factors can be partly, but only partly, explained by difference in the location, size, and type of stores considered. Fluctuations in retail prices are related directly to variations in retail margins and less closely to differences in spoilage losses.

Pronounced variations exist in retail prices and margins. The most noticeable difference is the considerably lower price and margin prevailing at cash-carry stores and in northern California. The average retail price and retail margin were also smaller for stores located in small towns and rural areas than for those in large cities. In addition, the price charged by large stores, generally, was less than at small stores, although their retail margins were somewhat higher--indicating that the purchase price is somewhat higher for small stores.

Losses due to spoilage were uniformly low--generally less than 3 per cent. This low average spoilage loss may be partially explained by the practice sometimes followed of immersing the butt ends of asparagus in water or moist moss. At times there is a net gain in weight after the asparagus leaves the farm. Spoilage is about twice as great in small as in large cities and in northern California compared to the southern portion of the state. There is also some tendency for these losses to be slightly higher in cash-carry stores.

In the large metropolitan centers of San Francisco, Los Angeles, and San Diego, consumer prices and retail margins were considerably lower at cash-carry stores than at stores offering credit or delivery services. There did not, however, seem to be large differences between large and small stores nor between grocery and fruit-vegetable stores located within these metropolitan areas.

Retail prices and spoilage were much higher for large fruit and vegetable stores than for large grocery and small stores located in the three large cities of the Central Valley (Sacramento, Stockton, and Fresno). In these cities retail prices, retail margins, and spoilage losses were somewhat higher at cash-carry stores--contrary to the situation in the metropolitan centers and at small city stores.

TABLE 5

Spoilage Loss, Retail Price, and Retail Margin on Fresh Asparagus Sold at Retail,
by Selected Store Groupings, California, March-June, 1949

Store type and area ^{a/}	Store visits ^{b/}	Volume reported ^{c/}	Average spoilage loss ^{d/}	Average retail price	Retail margin	
					Average ^{e/}	As per cent of price ^{f/}
	1	2	3	4	5	6
	number	crates	per cent	cents per pound		per cent
<u>All Store Types</u>						
California	603	7,003	1.4	19.5	8.0	34
Southern California	186	2,271	1.0	21.1	6.2	29
Northern California	417	4,732	1.8	18.0	4.5	25
<u>By Store Types (All California)</u>						
Credit-delivery stores	284	2,068	1.0	21.8	6.7	31
Cash-carry stores	319	4,935	1.1	18.2	5.5	30
Large stores	393	6,236	1.3	19.0	5.7	30
Small stores	210	767	1.5	20.0	5.0	25
Stores in large cities	300	5,031	1.0	19.6	5.7	29
Stores in small cities	303	1,972	1.9	19.3	4.9	25
<u>Metropolitan Los Angeles and San Francisco^{g/}</u>						
Credit-delivery stores	73	979	.6	23.2	8.0	34
Cash-carry stores	147	3,413	.8	18.3	5.7	31
<u>Sacramento, Stockton, and Fresno</u>						
Large fruit and vegetable stores	7	105	3.0	17.9	4.9	27
Large grocery and small stores	73	534	1.1	16.0	3.6	22
<u>Small Cities (All Store Types)</u>						
Southern California	62	458	1.0	20.5	5.6	28
Northern California	241	1,514	2.6	18.5	4.4	24

a/ See Appendix B for definitions of store types and areas.

b/ Number of usable field schedules collected on separate visits to retail stores (excluding reports with inadequate data and visits which indicated that no asparagus was sold).

c/ Quantity sold during the "last week" (for example, the week prior to the date of fieldman's visit).

d/ Proportion of asparagus thrown away during the week due to waste or spoilage.

e/ Difference between the retail selling price and the retailer's purchase price.

f/ Computed from unrounded data and may differ from column 5 divided by column 4.

g/ Including also San Bernardino, San Diego, and San Jose.

Note: See appendix table A-3 for data on original store grouping.

For rural areas and small towns, no consistent differences in prices, margins, or spoilage between cash-carry and credit-delivery or large and small stores were observable. Geographic location of the city appears to be the main factor accounting for variations. Prices and margins were more while spoilage losses were less in small cities of southern California than in small cities of northern California.

Preretail Margins.---The spread between the farm price and the price paid by retailers consists of the wholesaling margin, transportation charges, and packing and container costs. The relative importance of these three segments of the preretail marketing margin has already been indicated. But it may be well to supplement the preceding summary information with additional details for the three sets of data used in deriving the figures shown in table 2.

Wholesaling margins of wholesalers, truck-jobbers and truckers are shown in table 6. The average margin was 43 cents per crate for wholesalers, 36 cents for truck-jobbers, and 11 cents for truckers. Possibly the most striking fact revealed by these figures is the considerable variation in the wholesaler's margin. Within metropolitan San Francisco the difference between the wholesaler's selling and purchase price is only half as large as in other portions of the state.

Table 7 summarizes the packing and container costs for asparagus, whether incurred by growers and grower-shippers or by separate packers. It will be noted that these costs tend to increase progressively from the northern to the southern part of the state. Thus, these costs averaged about 70 cents per crate in Sacramento Valley and almost \$1.00 in the southerly asparagus producing areas. These data exclude harvesting and field packing costs.

Costs incurred for transportation services averaged 16.8 cents per crate for the state as a whole. Such charges were considerably higher in southern California than north of the Tehachapi Mountains--25.9 compared to 7.0 cents.

TABLE 6

Wholesaling Margin^{a/} for Fresh Asparagus by Dealer Types and Areas,
California, March-June 1949

Dealer type and area	Margin (per crate of 32.3 pounds) cents
Wholesaler	
Metropolitan Los Angeles	56.6
San Bernardino and San Diego	38.4
Metropolitan San Francisco and San Jose	25.5
Sacramento, Stockton and Fresno	40.2
Small cities	53.6
All California	42.9
Truck-jobber	
Southern California	36.5
Northern California	35.7
All California	36.0
Trucker	
All California	10.7

^{a/} Includes all charges, commissions, and brokerage fees, except transportation charges. When transportation was performed by the dealer himself, an estimate of the cost is deducted.

TABLE 7

Packing and Container Costs^{a/} for Fresh Asparagus
California, March-June 1949

Producing area	Growers	Grower-shippers	Packers
	cents per crate (of 32.3 pounds)		
Sacramento Valley	71		
Sacramento Delta	78	85	
North San Joaquin Valley	76	82	86
South San Joaquin Valley	92	95	
South Coast	101	98	
All California	89	92	86

^{a/} Excludes harvesting costs and costs for field packing. Management income (net profit) is included for packers but excluded for growers and grower-shippers.

Table 1

Table 1. The effect of the concentration of the solution on the rate of the reaction.

Concentration of the solution, %	Rate of the reaction, %/min
0.1	0.1
0.2	0.2
0.3	0.3
0.4	0.4
0.5	0.5
0.6	0.6
0.7	0.7
0.8	0.8
0.9	0.9
1.0	1.0

Table 1. The effect of the concentration of the solution on the rate of the reaction.

Table 2

Table 2. The effect of the concentration of the solution on the rate of the reaction.

Concentration of the solution, %	Rate of the reaction, %/min
0.1	0.1
0.2	0.2
0.3	0.3
0.4	0.4
0.5	0.5
0.6	0.6
0.7	0.7
0.8	0.8
0.9	0.9
1.0	1.0

Table 2. The effect of the concentration of the solution on the rate of the reaction.

Acknowledgments

An investigation of this type, based as it is on detailed analysis of hundreds of field interviews, requires the cooperation of many persons and groups. The author's indebtedness to those who helped in one way or another in this study is much greater than the brief summary nature of the report is likely to convey.

Alex Johnson of the California Farm Bureau Federation, Wendell Calhoun and D. B. DeLoach of the United States Bureau of Agricultural Economics, and Harry R. Wellman and Sidney S. Hoos of the California Agricultural Experiment Station helped immensely by their interest in the scope of the over-all investigation, general assistance in formulating plans, and helpful criticism throughout the study.

During its earlier phase, in 1948-1950, the analytical phases of the project were under the supervision of Walter D. Fisher. He assumed responsibility for editing the interview schedules, preparing the statistical tabulations and summaries, and developing suitable analytical methods. A great deal of the exploratory work for this report was completed by Dr. Fisher.

H. Fisk Phelps, Willard F. Williams, Robert V. Enochian, and George A. Jackson, Jr., all jointly employed by the Bureau of Agricultural Economics and the California Experiment Station, and Eldon Dye, Ralph Rush, and Irwin Rust of the California Farm Bureau were responsible for establishing and maintaining contacts with the trade and for collecting and editing the numerous statistical data. Mr. Williams was responsible for directing the field work of this investigation.

The compilation of many of the original data and the voluminous subsequent calculations and tabulations were performed largely by Dorothy Eaton, Mary Gouyon and Bernice Pfanner of the California Agricultural Experiment Station.

Finally, this study would have been impossible without the active cooperation of retail store managers, produce dealers, packers, and producers throughout California who generously furnished the detailed information requested on prices and sources of supply.

Introduction

The purpose of this study is to investigate the effects of the various factors which influence the rate of growth of the human body. The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

The study is based on the following assumptions: (1) that the rate of growth is determined by the amount of food and the amount of exercise; (2) that the rate of growth is determined by the amount of sleep; (3) that the rate of growth is determined by the amount of rest; (4) that the rate of growth is determined by the amount of work.

PROCEDURES USED

The Store Sample.--To obtain reliable information on channels of distribution and marketing costs, the sample of retail stores to be chosen was subjected to various controls--distribution of California population, income distribution within cities, store size, and type of store. In selecting the individual stores to be included, particular attention was given to two considerations. It was desired to represent the entire geographic area of the state, exclusive of Alpine, Mono, and Inyo counties. This meant that stores located reasonably near main highways were chosen as a means of effectively utilizing the available time of the fieldmen doing the actual interviewing. In passing it should be noted that cities near major highways, besides being conveniently located, tend to be larger and, therefore, that more stores from such towns normally would be included in the sample.

Secondly, the sample had to be limited to stores from which the required data would be given voluntarily and quickly because such information had to be secured directly from the store proprietor or manager. Actually, very few of the stores contacted refused cooperation.

Furthermore, since distributive channels were to be determined and described, certain sampling rates were deliberately introduced. For example, remote geographic areas, including mostly small stores, were included, even though certain time periods were overrepresented by this procedure. Yet, in this way additional information was secured on channels of distribution that probably are not functions of time. Limitation of time and personnel precluded collection of data in remote and sparsely settled areas of the state as frequently as in the more accessible areas. It was also felt that more effort should be spent in obtaining information on sources of supply and channels of distribution for retail stores in sparsely settled areas because there is likely to be a wider range of types of channels used in these regions.

Accordingly, two sets of retail stores were used. One, called the intensive sample, covered a smaller area and was visited twice a month. The other, designated the extensive sample, covered a wider area, and was visited once every six weeks. Figure 2 shows the geographic distribution of the 101 survey cities segregated into three groups (southern California, coastal northern California, and Central Valley region) for which separate interview routes were established. The cities and the number of retail stores included in the intensive and extensive samples of each of these three areas are listed separately in table A-1. These localities are arranged in the approximate order in which the successive stores were visited by the field representative in making his periodic visits.

A total of 66 retail stores in 22 cities was included in the intensive sample. Of these, 20 were located in metropolitan San Francisco, 11 in metropolitan Los Angeles, 19 in other large cities (with populations in excess of 50,000 inhabitants), and 16 in small cities. The extensive sample of 79 cities contained 117 retail stores. Only 5 of these stores were in large cities (Burbank and Glendale).

Stores located in Alpine, Mono, and Inyo counties and all farmers' roadside stands and restaurants were excluded. In addition, it was decided to not gather information from stores belonging to national chain store systems. Members of local chain store organizations, however, were included in the study.

THE [illegible]

[illegible text]

[illegible text]

[illegible text]

[illegible text]

[illegible text]

[illegible text]

TABLE A-1

19.

Number and Location of the Sample Retail Stores

Area and city	Number stores	Area and city	Number stores	Area and city	Number stores
<u>Intensive sample (visited twice each month)</u>					
<u>Southern California</u>		<u>Central Valley</u>		<u>San Francisco Bay Area</u>	
Los Angeles	7	Sacramento	5	San Francisco	10
Pasadena	2	Roseville	2	Oakland	5
Long Beach	2	Placerville	2	Berkeley	5
Santa Ana	1	Stockton	3	Palo Alto	2
San Bernardino	2	Tracy	1	San Jose	2
Riverside	2	Oakdale	1	Total	24
Escondido	1	Modesto	2		
San Diego	3	Merced	2		
Total	20	Fresno	4	Grand total	
		Total	22	(for 22 cities)	66
<u>Extensive sample (visited at six-week intervals)a/</u>					
<u>Southern California</u>		<u>San Joaquin Valley</u>		<u>Central Coast</u>	
Ventura	2	Rio Vista	1	San Martin	1
Oxnard	1	Walnut Grove	1	Gilroy	1
Santa Paula	1	Galt	1	Hollister	2
San Fernando	2	San Andreas	1	Santa Cruz	3
Burbank	2	Sonora	1	Watsonville	3
Glendale	3	Turlock	1	Salinas	2
Banning	1	Gustine	1	Seaside	1
Corona	1	Los Banos	1	Monterey	1
Elsinore	1	Madera	2	Carmel	1
Fallbrook	1	Coalinga	1	Gonzales	1
Oceanside	1	Reedley	2	King City	1
Ramona	1	Dinuba	2	Paso Robles	2
Jacumba	1	Visalia	3	Atascadero	2
El Centro	2	Exeter	1	Santa Margarita	1
Brawley	2	Lindsay	1	San Luis Obispo	2
Indio	2	Porterville	2	Arroyo Grande	1
Total	24	Avenal	1	Santa Maria	2
		Wasco	1	Lompoc	2
		Taft	2	Total	29
		Bakersfield	3		
		Total	29		
		<u>Sacramento Valley</u>		<u>North Coast</u>	
		Fairfield	1	San Rafael	2
		Winters	1	Petaluma	1
		Woodland	2	Santa Rosa	2
		Auburn	1	Ukiah	2
		Grass Valley	1	Lakeport	1
		Marysville	2	Calistoga	1
		Williams	1	Napa	2
		Willows	1	Vallejo	2
		Oroville	1	Concord	1
		Chico	2	Livermore	1
		Orland	1	Total	15
		Cornning	1		
		Red Bluff	2		
		Redding	2		
		Dunsmuir	1	Grand total	
		Total	20	(for 79 cities)	117

a/ Once during early April and once during early June.

STATE OF NEW YORK, DEPARTMENT OF AGRICULTURE

No.	NAME OF PERSON OR FIRM	ADDRESS	CITY	COUNTY
1	J. B. ALLEN 123 Main St. New York City	123 Main St. New York City	New York	New York
2	J. B. ALLEN 123 Main St. New York City	123 Main St. New York City	New York	New York
3	J. B. ALLEN 123 Main St. New York City	123 Main St. New York City	New York	New York

On the basis of supplemental information collected, each store was classified according to its geographic location, volume of sales, and type in order to permit a determination of whether significant differences in prices, margins, and spoilage exist for different subgroups. Store size was determined according to sales of all fresh fruits and vegetables during 1948. Stores with sales of fresh fruits and vegetables in excess of \$25,000 were classed as large stores; small stores included those with a lesser volume of sales. In addition, information was gathered on store type (in accordance with the definitions listed in Appendix B). Each establishment was classed as an (1) independent or a (local) chain store, (2) a fruit and vegetable or a grocery store, and (3) a credit-delivery or a cash-carry store.

Data Collection.—Four fieldmen devoted full time to gathering the data needed for this study. On each visit to a retail store, the field representative secured (for each fresh commodity included in the study) ^{1/} information on: (1) the volume of last week's sales, (2) last week's loss due to waste and spoilage, (3) the purchase and selling price of the produce being displayed, and (4) the source of the store's supplies. The data supplied on last week's sales and loss were used to determine the spoilage factor and the relative weights to be attached to each store in the computation of weighted averages. Information on prices and sources of supply was utilized for determining gross margins of retailers and dealers and for indicating channels of distribution.

Retailers specified dealers from whom current supplies of fresh fruits and vegetables were secured. These dealers were interviewed to obtain information on their own prices and sources of supply. Suppliers of the first dealers were then contacted to ascertain their prices and sources. This same procedure was repeated until the grower source was reached or until sources were traced back as far as possible. In the majority of cases the original source in the producing area could be ascertained.

By following the movement of each lot of supplies from the retail store back to the original producer, it was possible to double check the prices reported at the various points of the distributive system and to consider prices for individual lots. Where identity of the individual lot could not be retained, prices were obtained for the commodity, of a similar quality, handled on the same day as that on which the lot in question was handled. Not much substitution of this type was necessary except where dealers made mistakes in recalling their sources of supply. Thus, margins (the differences between selling and purchase prices) could be determined directly for individual transactions without using average market prices.

Weighting System.—The individual schedules provided the mass of information from which inferences were to be drawn regarding marketing channels and margins prevailing for California-produced fresh fruits and vegetables sold within the state. It was desired to show this information by geographic location, city size, store size, and store type. For this purpose the data from individual schedules were combined into average prices, average margins, average spoilage losses, etc., in two ways. The initial step consisted of summarizing the data for all visits within each subgroup (for example, large grocery stores in metropolitan San Francisco), using "last week's" sales as weights. In

^{1/} The commodities included were fresh asparagus, cantaloupes, carrots, celery, grapes, lettuce, oranges, peaches, pears, potatoes, and tomatoes.

merging the original groups into larger groups (for example, all retail stores in northern California), the weights used were estimated retail sales of all fresh fruits and vegetables during 1948 given in table A-2.

The latter weights were secured on the basis of the distribution of California population in 1948 (as estimated by the U. S. Bureau of the Census) and on the distribution of sales of fresh fruits and vegetables among different store sizes and store types as obtained from the 1939 census of retail trade. This determination was made in the following way:

1. Sales of fresh fruits and vegetables for the various geographic areas and certain store types (see Appendix B) in 1939 were converted to a per-capita basis.
2. The estimated 1948 population for California was distributed among these areas according to the 1947 population distribution.
3. Dollar sales in 1948 were determined, using the above information and assuming that retail prices in California increased during the decade (1939-1948) in the same ratio as United States prices, that per-capita physical consumption remained unchanged, and that 1939 percentage distributions by store size and store type were applicable to 1948.

The percentage weights determined in this manner are shown in table A-2. It is estimated that in 1948 total California retail sales of fresh fruits and vegetables (exclusive of the area east of the Sierra Nevada Mountains) are distributed almost equally between northern and southern California (48.7 vs. 51.3 per cent). In southern California 65 per cent of total sales occur in large cities and 35 per cent in small cities compared to 46 and 54 per cent, respectively, in the northern portion of the state. A slightly larger volume of fresh fruits and vegetables is sold in small stores than in large stores located in the small cities of the state. In the large cities, especially in southern California, however, a considerably smaller total volume of sales occurred in small stores.

Distribution Channels.--Three factors were expected to affect the source from which a retailer will secure his supplies. Accordingly, the sample stores were classified into twenty-five groups based on size of stores as measured by 1948 sales of fresh fruits and vegetables, the size of the city in which the store operates, and the geographic area where it is located.

For each category an estimate was made of the proportion of retailer's supplies coming from different sources (dealer or geographic). This estimate was obtained by recording the source of supply for the lot found in the retail store sampled on the day of the interview and weighting this source by last week's sales. It is believed that no significant error is introduced by this procedure, which assumes that there is no significant variation in the sources used by a retailer over the period of one week, even though a considerable change may occur over longer periods of time. Channel percentages leading to each dealer type (for example, wholesaler or truck-jobber), that is, for stages preceding the retail level, were obtained in a similar manner. This procedure was followed backwards in the marketing process until the original producer sources were encountered.

TABLE A-2

Estimated Distribution^{a/} of Fresh Fruits and Vegetables Sold at Retail, California, 1948

City size and area ^{b/}	Large stores ^{b/}			Small stores ^{b/}	All stores
	Grocery	Fruit and vegetable	All		
	1	2	3	4	5
	per cent of sales in southern California ^{c/}				
<u>Large Cities</u>					
Metropolitan Los Angeles			34.1	21.7	55.8
San Bernardino and San Diego			5.8	3.7	9.5
Total	17.2	22.7	39.9	25.4	65.3
<u>Small Cities</u>					
Imperial and Coachella valleys			.5	.5	1.0
Balance of southern California			15.8	17.9	33.7
Total			16.3	18.4	34.7
<u>All Cities</u>			56.2	43.8	100.0
	per cent of sales in northern California ^{c/}				
<u>Large Cities</u>					
Metropolitan San Francisco and San Jose	8.6	13.6	22.2	17.1	39.3
Sacramento	} 2.3	.6	2.9	3.6	{ 2.8 3.7
Stockton and Fresno					
Total	10.9	14.2	25.1	20.7	45.8
<u>Small Cities</u>					
North Coast			3.1	3.6	6.7
San Francisco Bay area (less 2 counties) ^{d/}			4.2	4.6	8.8
Santa Clara, San Benito, Santa Cruz, and Monterey counties			3.3	3.8	7.1
San Luis Obispo and Santa Barbara counties			.9	1.0	1.9
North Sacramento Valley			2.8	3.2	6.0
South Sacramento Valley			2.7	3.1	5.8
North San Joaquin Valley			3.1	3.5	6.6
South San Joaquin Valley			5.3	6.0	11.3
Total			25.4	28.8	54.2
<u>All Cities</u>			50.5	49.5	100.0

^{a/} Based on distribution of California population in 1948 (as reported by the U.S. Bureau of Census) and on distribution of California retail sales of fresh fruits and vegetables among different types and sizes of stores (as reported by the 1939 retail census of distribution).

^{b/} See Appendix B for definitions of areas and of store types.

^{c/} It is estimated that 51.3 per cent of total sales were in southern California and 48.7 per cent in northern California.

^{d/} Excluding Santa Clara and San Benito counties.

These data provide information for showing the relative volume of the commodity ultimately sold at retail which was handled by different dealer types. Average percentages for southern California and northern California were computed using the weights specified in table A-2. The resulting composite figures were used in preparing the charts on marketing channels shown in figure 1 of the text. Table 3 indicates the relative importance of the various producing areas in supplying retail stores in large and small cities of the three major California regions.

Marketing Costs.--In classifying the sample stores into subgroups for purposes of deriving marketing costs, a different grouping from that adopted for determining distribution channels was used. Larger geographic areas were established. The number of subgroups was increased, however, by making a further breakdown of large stores into grocery stores and fruit and vegetable stores and by classifying each store as an independent or a chain store and according to whether or not it offered some credit or delivery service.

Average retail prices, average retail margins, and average spoilage losses for the various subgroups were determined by combining the data obtained from the several individual store interview schedules for each category using "last week's" sales as weights. Table A-3 presents these results for all the groups together with the number of store visits and the volume reported. Data are also given for all store types in California, southern California, and northern California. These data are summarized for broader store groupings in table 5 of the text. Where larger categories of stores were established by merging the data for the original groups, the percentage weights listed in table A-2 were used.

The gross margin for each dealer was taken to be the difference between his selling price (f.o.b. his premises) and his purchase price (delivered to his premises). Where the dealer performed the transportation himself, a deduction for the estimated amount of the transportation cost was made. In addition, any brokerage fees paid were considered to be part of the wholesaler's margin. This procedure was followed in order to secure comparability as between wholesalers who employed independent brokers and those who employed their own salesmen.

Estimates of packing and container charges were obtained through personal interviews with growers, grower-shippers, and packers whose names were given in the tracing-back process previously described. "Farm production" is considered to include all costs up to the point where the commodity is brought to the farm gate or packing house door in a prepacked condition. Marketing costs are those expenses incurred after this point. Harvesting costs, therefore, are considered to be one item of production costs. Where picking was performed by the party doing the packing, an estimate for picking costs was made.

From these data it is possible to estimate the main cost components incurred in moving fresh produce from the grower to the consumer. This information is shown in text table 4 and figure 3. Tables 6 and 7 of the text summarize data on the wholesaling margin and on packing and container costs.

TABLE A-3

Spoilage Loss, Retail Price, and Retail Margin on Fresh Asparagus
Sold at Retail, by Store Type and Area, California, March-June 1949

Store type and area ^{a/}	Store visits ^{b/}	Volume reported ^{c/}	Average spoilage loss ^{d/}	Average retail price	Retail margin	
					Average ^{e/}	As per cent
					of price ^{f/}	of price ^{f/}
	1	2	3	4	5	6
	number	crates	per cent	cents	per pound	per cent
<u>All Store Types</u>						
California	603	7,003	1.4	19.5	5.3	27
Southern California	186	2,271	1.0	21.1	6.2	29
Northern California	417	4,732	1.8	18.0	4.5	25
<u>Metropolitan Los Angeles, San Bernardino, and San Diego</u>						
Credit or delivery	40	263	0.8	26.6	8.9	34
Cash and carry	84	1,550	0.8	19.2	6.1	32
Large--grocery	68	1,270	0.8	19.9	6.2	31
Large--fruit and vegetable	26	479	0.7	21.1	7.2	34
Small--all types	30	64	1.4	22.4	5.9	26
<u>Metropolitan San Francisco and San Jose</u>						
Credit or delivery	33	716	0.2	18.2	6.5	36
Cash and carry	63	1,863	0.9	16.8	5.0	30
Large--grocery	22	738	1.7	16.1	4.2	26
Large--fruit and vegetable	58	1,780	0.3	17.6	6.0	34
Small--all types	16	61	0.8	18.2	4.4	24
<u>Sacramento, Stockton, and Fresno</u>						
Credit or delivery	30	242	0.4	15.4	2.9	19
Cash and carry	50	397	2.1	16.9	4.2	25
Large--grocery	30	335	1.1	15.9	3.3	21
Large--fruit and vegetable	7	105	3.0	18.0	4.9	27
Small--all types	43	199	1.1	16.1	3.7	23

(Continued on next page.)

Table A-3 continued.

Store type and area ^{a/}	Store visits ^{b/}	Volume reported ^{c/}	Average spoilage loss ^{d/}	Average retail price	Retail margin	
					Average ^{e/}	As per cent of price ^{f/}
	1	2	3	4	5	6
	number	crates	per cent	cents per pound		per cent
<u>Small Cities--Southern California</u>						
Credit or delivery	26	106	1.1	24.1	6.7	28
Cash and carry	36	352	1.2	19.4	6.1	31
Large	45	424	1.2	20.5	6.3	31
Small	17	34	0.7	20.6	5.1	25
<u>Small Cities--North and Central Coast</u>						
Credit or delivery	48	286	2.2	18.8	5.0	27
Cash and carry	33	343	1.4	18.6	5.1	27
Large--North Coast	21	202	2.9	16.9	4.2	25
Large--Central Coast	30	297	.9	19.2	5.5	29
Small--North Coast	12	80	4.1	18.1	4.4	24
Small--Central Coast	18	50	0	24.1	7.6	31
<u>Small Cities--Sacramento and San Joaquin Valleys</u>						
Credit or delivery	107	455	3.1	18.7	3.9	21
Cash and carry	53	430	2.8	16.8	3.3	20
Large--Sacramento Valley	37	260	2.4	17.4	3.7	22
Large--San Joaquin Valley	49	346	3.6	17.9	3.4	19
Small--Sacramento Valley	34	135	2.8	17.1	4.1	24
Small--San Joaquin Valley	40	144	2.7	18.9	3.7	19
<u>Independent Credit-Delivery Stores</u>						
Southern California	66	369	0.9	25.8	8.2	32
North and Central Coast	79	962	0.6	18.4	6.2	34
Sacramento and San Joaquin valleys	126	671	2.3	17.4	3.5	20

(Continued on next page.)

Table A-3 continued.

Store type and area ^{a/}	Store visits ^{b/}	Volume reported ^{c/}	Average spoilage loss ^{d/}	Average retail price	Retail margin	
					Average ^{e/}	As per cent of price ^{f/}
	1	2	3	4	5	6
	number	crates	per cent	cents per pound		per cent
<u>Independent Cash-Carry Stores</u>						
Southern California	97	1,226	1.1	19.1	6.2	33
North and Central Coast	88	1,703	0.6	17.4	5.3	30
Sacramento and San Joaquin valleys	98	.721	2.3	17.2	4.0	23
<u>Local Chain Stores</u>						
Southern California	23	676	0.5	19.6	5.8	29
North and Central Coast	10	543	2.5	16.2	4.2	26
Sacramento and San Joaquin valleys	16	132	3.3	15.8	2.7	17

a/ See Appendix B for definitions of store types and areas.

b/ Number of usable field schedules collected on separate visits to retail stores (excluding reports with inadequate data and visits which indicated that no asparagus was sold).

c/ Quantity sold during the "last week," (that is, the week prior to the date of fieldman's visit).

d/ Proportion of asparagus thrown away during the week due to waste or spoilage.

e/ Difference between the retail selling price and the retailer's purchase price.

f/ Computed from unrounded figures and may differ from column 5 divided by column 4.

DEFINITION OF TERMS

Two metropolitan areas are set up to include the cities of Los Angeles and San Francisco with their surrounding environments. The portion of California east of the Sierra Nevada Mountains (Alpine, Mono, and Inyo counties) was excluded from the study. The remainder of the state is divided into two major regions--southern California and northern California--by the Tehachapi Mountains. Northern California is further subdivided into seven areas.

An arbitrary distinction is drawn between grower-shippers and growers. A "dealer" is defined so as to exclude retailers, producers, brokers, and common carriers. Four dealer categories are established--packers, wholesalers, truckers, and truck-jobbers.

Retail stores are classified according to volume of fresh fruits and vegetables sold, line of commodities handled, kind of business organization, and whether credit and delivery services are offered.

The precise definitions adopted for this study are listed below under three classifications.

Geographic Areas

Metropolitan Los Angeles: The cities of Los Angeles, Pasadena, Burbank, Glendale, Santa Monica, and Long Beach.

Metropolitan San Francisco: The cities of San Francisco, Oakland, Berkeley, Richmond, and Alameda.

Large Cities: Cities with 50,000 or more inhabitants in 1948.

Small Cities: Cities with less than 50,000 inhabitants in 1948.

Southern California: The portion of California lying south of the Tehachapi Mountains and east of Santa Barbara County, but including the city of Santa Barbara and immediate environments--that is, including the seven counties of Ventura, Los Angeles, San Bernardino, Riverside, Orange, San Diego, and Imperial, and the city of Santa Barbara and its immediate environments.

Northern California: The portion of California lying north of the Tehachapi Mountains and west of Ventura County, but excluding the counties of Alpine, Mono, and Inyo and the city of Santa Barbara and immediate environments--that is, all of the state lying outside the area defined as southern California, except the counties of Alpine, Mono, and Inyo which are excluded from the study. Northern California includes two subregions: coastal northern California (Central Coast, North Coast and San Francisco Bay area) and the Central Valley (Sacramento Valley and San Joaquin Valley).

Central Coast: The four counties of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara, but excluding the city of Santa Barbara and immediate environments.

North Coast: The eight counties of Marin, Sonoma, Napa, Lake, Mendocino, Trinity, Humboldt, and Del Norte.

San Francisco Bay Area: The six counties of San Francisco, San Mateo, San Benito, Santa Clara, Alameda, and Contra Costa, and the city of Vallejo.

South Sacramento Valley: The five counties of Solano (excluding the city of Vallejo), Yolo, Sacramento, El Dorado, and Placer.

North Sacramento Valley: The thirteen counties north of South Sacramento Valley and east of North Coast.

South San Joaquin Valley: The five counties of Kern, Kings, Tulare, Fresno, and Madera.

North San Joaquin Valley: The seven counties of Merced, Stanislaus, San Joaquin, Mariposa, Tuolumne, Calaveras, and Amador.

Dealer Types

Grower: A producer who is actually engaged in growing operations on land (either owned or rented) where the commodity is produced and who does not operate a permanent packing shed. He may pack produce by means of temporary facilities.

Grower-Association: A cooperation established for the purpose of marketing or processing fresh fruits and vegetables produced by grower members. (A group of growers working together in harvesting and marketing a crop and jointly sharing in the receipts is considered a grower-association, even though a formal association has not been legally established. As a guide, the field work was conducted subject to the rule that the informal group must include at least ten producer members before it was classed as a grower-association.)

Grower-Shipper: A producer who also operates a permanent packing shed and who grows more than 50 per cent of the produce packed in this shed. (Usually a grower-shipper is a large producer.)

Retailer: A person whose principal business is to sell to individual consumers, but excluding any producer who sells directly to consumers, except where such producer has an established retail outlet which is his major business.

Broker: An agent who does not have title to or physical control of the produce, but who negotiates sales and receives a brokerage or commission fee.

Dealer: A person whose principal business is to buy produce on his own account or to receive produce on consignment and to sell it to others, except individual consumers. (This is a general term intended to include packers, wholesalers, truckers, and truck-jobbers and to exclude retailers and producers, and also brokers and common carriers who do not take title to produce.)

Packer: A dealer who assembles, packs, processes, loads, and/or ships produce, the major portion of such produce being bought from growers or handled for their account. (Usually he operates a permanent packing shed. If a party grows more than 50 per cent of the produce packed, he is classified as a Grower, Grower-Association, or Grower-Shipper and not as a Packer.)

Wholesaler: A dealer whose principal business is to receive produce, store it, and resell it to others at an established place of business. (He may buy either from growers or other dealers and may sell either to retailers or other dealers. He may perform delivery service but must have an established place of business. If a dealer has no such facilities, he is classified as a Truck-Jobber.)

Truck-Jobber: A dealer who buys primarily from wholesalers, carries a wide variety of items per truckload, and sells only to retailers at their door. (He may have storage facilities but does not sell on established premises. Usually a regular truck route is followed.)

Trucker: A dealer whose principal business is to buy produce in producing areas, transport it, and resell it either to retailers or other dealers. He handles only a few items per truckload. (He may operate a fleet of trucks. If a party does not buy the produce outright or take it on consignment, he is not considered a dealer but as a person hired to perform transportation services.)

Store Types

Large Store: A retail store with sales of fresh fruits and vegetables amounting to over \$25,000 during 1948.

Small Store: A retail store with sales of fresh fruits and vegetables amounting to \$25,000 or less during 1948.

Fruit and Vegetable Store: A retail store whose principal business is to sell produce. (It may be a fruit and vegetable stand or store, or a leased department in a supermarket. The classification is according to management and operation and not building.)

Grocery Store: Any other retail store handling fruits and vegetables.

Local Chain Store: A single store unit of a group of retail stores, local to the area, centrally owned and with some degree of centralized control of operation. (Stores of national chain systems are excluded.)

Independent Store: A retail store which is controlled by its own individual ownership or management rather than from without. (This designation refers to retail stores which are not units of national or local chain store systems.)

Credit-Delivery Store: A retail store offering credit and/or delivery services to its customers in connection with the sale of goods.

Cash-Carry Store: A retail store offering neither credit nor delivery services to its customers.

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...

...the ... of the ...
...the ... of the ...
...the ... of the ...
...the ... of the ...